Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Digital Audio Broadcasting Systems	)	MM Docket No. 99-325
And Their Impact On the Terrestrial Radio	)	
Broadcast Service	)	

To: The Commission

COMMENTS OF NATIONAL PUBLIC RADIO, INC.

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Summary

With the long-awaited advent of digital audio broadcasting ("DAB") about to be realized, radio stands on the verge of a new century of service. Digital technology offers a wealth of benefits: improved sound quality, enhanced spectrum flexibility and efficiency, cost savings, and more. Combining all these benefits, however, only begins to describe the digital radio future, and the digital public radio future, in particular. We believe the importance of DAB is ultimately more about content than just audio quality, and we are excited by the opportunity to expand our program service offerings to the public.

It was on the basis of this belief in expanded audio program service that NPR, along with the Harris and Kenwood Corporations and several NPR Member stations, obtained experimental broadcast authorization to conduct field tests of the multicast capability of the iBiquity DAB technology ("Tomorrow Radio[sm]"). Those field tests established that iBiquity's technology permits broadcast stations to offer multiple digital audio program services and that the digital transmission was robust enough to serve most, if not all, of a station's primary coverage area. In addition, independent audio quality testing found that the audio quality of the main audio channel compared favorably to the CD source material and the supplemental channel compared favorably to analog FM service.

Not only does the technology work, and work well, multicasting offers significant benefits to the public. During the past decade, public broadcasters, in particular, have been unable to construct new stations because of protracted delays in the licensing of stations, the prohibitive cost of purchasing stations, and the unavailability of frequency in more populous areas. Multicasting significantly addresses the pent-up demand for spectrum, and we expect this increased broadcasting capacity to trigger an explosion of new services. Utilizing the inherent

flexibility of digital technology, we foresee new homeland security, assisted living, foreign language, and specialized news and information services. Already, there is a wealth of programming distributed via the Public Radio Satellite System that is unheard in many markets because stations currently lack the broadcast capacity to air it. In addition to preserving existing analog SCA-based radio reading services for the print impaired during the DAB transition, NPR is also committed to the expanded availability of radio reading services in the digital future, and we have expended and will expend considerable resources toward those ends.

In short, based on the Tomorrow Radio[sm] test results, including the lack of interference associated with subdividing the digital bitstream, and the public interest benefits inherent in multicasting, we urge the Commission to authorize digital audio multicasting without delay and without requiring special licensing. The broadcasting and consumer electronics industries are poised to implement the multicast capabilities of the iBiquity system as soon as the Commission acts.

With respect to service and other regulatory requirements, the Commission should require stations to provide a free over-the-air digital broadcast service in addition to the existing analog broadcast service but otherwise afford stations substantial flexibility to ascertain and serve the needs of their communities. Public radio stations, in particular, are inherently local institutions with a rich history of service to their communities through the broadcast of noncommercial news, information, and cultural programming. Public radio stations are also subject to important social forces, including community advisory boards, open public meetings, and public board members, which ensure their responsiveness to the public they are licensed to serve. Public radio stations also derive the largest share of their revenue from their communities in the form of voluntary membership pledges, further ensuring their responsiveness.

Accordingly, while we believe it is appropriate to extend existing public interest obligations to the entirety of a station's free, over-the-air program services, there is little need to impose comprehensive new regulatory requirements on stations converting to DAB, particularly during what is likely to be an extended period of hybrid analog/digital operation.

Specifically, given continued improvements in digital technology, the Commission should not mandate a minimum amount of high definition audio or specify the amount of digital capacity that a station should allocate to particular audio or data services. The Commission should generally authorize stations to produce and distribute datacast services. We do not believe the Commission should impose program origination, format, or content requirements because such requirements inherently involve subjective judgments and invite arbitrary distinctions. In general, unless and until there is a compelling reason to change an existing rule, the Commission should refrain from doing so. It is also premature to even consider service rules to govern all-digital operation, since it will likely be many years before digital radios effectively supplant analog radios as the predominant means of receiving over-the-air radio broadcast programming.

With respect to NCE radio stations specifically, the Commission should authorize such stations to offer ancillary and supplemental services for remuneration and without having to pay spectrum fees. The Commission enjoys ample authority to authorize subscription and other remunerative services, and sound public policy compels such an authorization. Just as NCE radio stations were authorized to use their analog SCAs for remunerative purposes, the digital capacity will allow stations to further diversify their revenue sources. At least during the period of hybrid operation, NCE radio stations should be required to offer free over-the-air analog and digital NCE services, but they should be free, as a Commission matter, to utilize their remaining

capacity for other purposes. As either government or non-profit entities, NCE radio stations are subject to significant restrictions on their commercial activities, and we expect stations to pursue ancillary services, such as a "pledge-free" subscription service for station members, that are consistent with their noncommercial mission. While the offering of these services could, in some instances, exceed the definition of a noncommercial educational broadcast service, the entirety of the station's programming offerings and its essential character as an NCE radio entity would not be compromised.

We believe the Commission lacks authority to impose spectrum fees on ancillary uses of digital spectrum but, in any event, the Commission should exempt NCE radio stations from any spectrum fee the Commission may seek to impose. NCE radio stations are statutorily exempt from the existing application and regulatory fees, and the public policy considerations that justify those exemptions extend naturally to any spectrum fee associated with a digital radio service. As Congress and the Commission have repeatedly found, the imposition of user fees on public radio stations only undermines the financial support that Congress and the states provide.

With respect to the existing technical rules, the Commission should consider only limited changes. The Commission should not simply extend the existing television Channel 6 rules, which are based on 20 year old analog television receiver design. Rather, the Commission should examine the continuing need, if any, for the television Channel 6 rules, based on the current state of television receiver technology, the conversion to digital television ("DTV"), and the public's limited reliance on over-the-air broadcast television reception. Given the reduced signal strength associated with in-band, on-channel ("IBOC") digital transmissions, moreover, we do not expect digital radio stations in television Channel 6 markets to cause new or increased interference.

The Commission should also facilitate the use of digital translator and booster stations. Public radio translator and booster stations serve substantial audiences in hundreds of communities across the United States. To avoid frustrating the digital transition of full power stations, however, the Commission should not mandate the conversion of all related analog translator stations as a condition to converting a primary station. We would also support the use of alternative delivery means to "feed" non-reserved FM translators that extend a station's signal beyond its primary coverage area, but only if the Commission adopts distance or other limitations to preserve the local nature of translator service and broadcast service generally. Before authorizing the use of alternative delivery means, moreover, the Commission should seek public comment on the specific distance or other limitation(s) that it is contemplating adopting so that potentially affected parties can identify problematic aspects of the proposed approach(es).

Finally, we believe it is premature for the Commission to consider specific receiver-based mechanisms to prevent the copying and distribution of copyrighted works. It is incumbent on the Recording Industry Association of America ("RIAA") to demonstrate a concrete harm associated with DAB, and, given the nascent state of the technology, we do not believe such a showing can be made at this time. There is an existing statutory mechanism to compensate copyright owners for the use of digital recording devices, moreover, and, at present, there is no reason to believe that this mechanism will be inadequate or that copyright infringement will threaten the demise of free over-the-air broadcasting and trigger the Commission's statutory authority over the matter.

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To: The Commission

Comments of National Public Radio, Inc.

Introduction

Pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.415, National Public Radio, Inc. ("NPR") hereby submits its Comments in response to the Commission's Further Notice of Proposed Rulemaking and Notice of Inquiry in the above-captioned proceeding.[1]

NPR is a non-profit membership corporation which produces and distributes noncommercial educational programming through more than 750 public radio stations nationwide. In addition to broadcasting award winning NPR programming including *All Things Considered®, Morning Edition®, Talk Of The Nation®,* and *Performance Today®*, NPR's Member stations originate significant amounts of news, information, and cultural programming. NPR also operates the Public Radio Satellite System ("PRSS") and provides representation and other services to its Member stations.

I. The Commission Should Authorize Radio Stations To Offer Multiple Audio

[1] In the Matter of Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, Further Notice of Proposed Rulemaking and Notice of Inquiry, MM Docket 99-325, rel. Apr. 20, 2004 [hereinafter "FNPRM/NOI"].

Channels

A. The Technology Permitting Supplemental Audio Channels Has Been Demonstrated To Work Under Real World Conditions And Is Ready To Be Deployed

The promise of using digital technology to broadcast multiple streams of audio programming dates back at least as far as the initial Notice of Proposed Rulemaking in this proceeding.[2] In authorizing radio stations to implement the iBiquity IBOC technology in its subsequent Report and Order, the Commission specifically cited the additional audio programming potential of the iBiquity system to expand and improve radio service to the public.[3] As the Commission also recognized, however, there was a need to develop the iBiquity technology to ensure that stations might transmit multiple digital audio programming channels to a meaningful portion of the station's authorized service area without causing harmful interference to existing services.[4]

Based on the Commission's endorsement of, and NPR's strong interest in, audio program multiplexing, NPR, along with the Kenwood Corporation and the Harris Corporation, began planning field tests of an FM channel multiplexing enhancement to the IBOC system shortly after the Report & Order was released. The purpose of the Tomorrow Radio[sm] testing was to evaluate mobile reception of the supplemental audio channel ("SAC") capability of the iBiquity

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[2] See Comments of National Public Radio, Inc., In the Matter of Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, MM Docket 99-325, at 5-9, filed Feb. 19, 2002.. Indeed, a software demonstration of secondary audio capability that NPR commissioned in response to the NPRM is still publicly available. See id. at 9 (describing the software download at www.npr.org/impulse2).

[3] In the Matter of Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, Report and Order, 17 FCC Rcd 19990, at 20002-03 (2002) (hereinafter "Report and Order"].

[4] See id. at 20004.

IBOC system and determine whether it was sufficiently robust to serve the typical analog service area of the host station.[5] NPR reported the preliminary results of its Tomorrow Radio[sm] testing to FCC Media Bureau staff in December 2003[6] and the final results to the National Radio Systems Committee ("NRSC")[7] shortly thereafter. NPR formally filed its final test report in March 2004.[8] The results of this "real world" testing of the iBiquity system's multicast capability can be summarized succinctly: "It works; it's ready."[9]

Specifically, the Tomorrow Radio[sm] testing confirmed the viability of subdividing the HD Radio 96 kbps data stream into multiple data streams for purposes of broadcasting audio programming. In these tests, the 96 kbps main audio program ("MAP") data stream was divided into a 64 kbps MAP channel and a 32 kbps supplemental audio channel ("SAC"). The 64 kbps MAP channel behaved identically to the standard 96 kbps MAP channel, featuring blend-to-

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[5] The testing was conducted pursuant to experimental broadcast authorizations at NPR Member stations WETA-FM, Washington, DC, WNYC-FM, New York-NY, KALW-FM, San Francisco, CA, and KKJZ-FM, Los Angeles, CA during the summer and fall 2003. Each participating station was outfitted by Harris Corporation with production broadcast transmission hardware. Kenwood Corporation utilized a modification of a pre-existing field testing package to gather performance data over defined mobile test routes. Kenwood also provided prototype production receivers modified to decode the Tomorrow Radio[sm] test version of the iBiquity system. Each station's IBOC transmitting facility included a software modification to the digital exciter to allow Tomorrow Radio[sm]-format transmissions.

[6] National Public Radio, Inc., Notice, MM Docket No. 99-325, filed Dec. 19, 2003.

[7] The National Radio Systems Committee ("NRSC") is jointly sponsored by the National Association of Broadcasters (NAB) and the Consumer Electronics Association (CEA) to study and make recommendations for technical standards that relate to radio broadcasting and the reception of radio broadcast signals. See http://www.nrscstandards.org.

[8] National Public Radio, Tomorrow Radio[sm] Field Testing in the Washington, D.C., New York City, San Francisco, and Los Angeles (Long Beach) Radio Markets, Final Report, MM Docket No. 99-325, filed Mar. 10, 2004.

[9] Report & Order at ¶ 6.

analog when the digital signal is lost. While the 32 kbps SAC did not have an analog program backup, the digital SAC reached virtually the same primary coverage area as the MAP channel and the existing analog signal with a quality signal.

Indeed, the engineering consulting firm, Hammett & Edison, concluded to a 95% certainty that the Tomorrow Radio SAC service area would reach a typical FM station's 70 dBu to 60 dBu service area. In the case of WNYC-FM, New York, NY, for instance, the testing yielded a SAC service area containing 15,747,274 persons, which represents 129% of the population within the station's projected 70 dBu contour, 103% of the population within the projected 60 dBu contour, and 93.6% of the population within the projected 54 dBu contour. Based on these results and those of the other participating stations, the SAC signal is sufficiently robust to serve at least a station's city grade contour area and most, if not all, of its protected contour area.

A subjective audio quality listening test also showed that there is little perceptible difference in quality between the 96 kbps "high definition" ("HDC96") signal and a 64 kbps ("HDC64") signal.[10] In all tested categories of audio genre -- classical, critical, rock, and speech -- the difference between the CD source, HDC96, and HDC64 was statistically insignificant.[11] With the exception of the "rock" category, both 96 kbps and 64 kbps audio were also rated significantly better than all FM analog transmissions.[12]

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[10] Ellyn G. Sheffield, Subjective Test Results for FM IBOC DAB, Generation 3 Hardware, Report to the National Radio Systems Committee and iBiquity Digital Corporation, at 6 (Feb. 25, 2004. We understand that iBiquity will be formally filing the test results with the Commission in this proceeding.

[11] Id.

[12] Id.

B. Multicasting Offers Abundant Public Interest Benefits

To a producer and distributor of noncommercial educational news, information, and cultural programming and a network of stations that produce and broadcast such programming, audio quality is important. The public today possesses an unprecedented choice of means to enjoy audio content, and the ability of NPR and its Member stations to serve our listeners depends in significant part on providing a high quality audio signal. Based on the current evolution of the iBiquity IBOC system and the promise of future improvement, we believe the technology represents a substantial improvement on current analog technology. To NPR, however, the promise of digital radio has never been just about audio quality.

The driving force behind public radio's digital transition is the expanded public service and programming opportunities demonstrated and proven by the Tomorrow Radio[sm] project. Terrestrial radio is the most ubiquitous, most accessed content delivery medium in the United States, and we believe digital technology and its multicasting functionality will reinvigorate the service capabilities of the radio broadcasting medium. The types of NCE programming services we expect stations to offer will be limited only by their imaginations, the needs of their communities, and the resources available to produce or acquire the programming.

Currently, the PRSS[13] delivers thousands of hours of news, cultural, and specialized audience programming every year to NCE stations across the country. For many years, the volume of programming available via the PRSS has far exceeded the amount of broadcast time

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[13] A national, satellite-based interconnection system, the PRSS includes multiple uplinks, more than 400 downlinks, and over 250 program producers and distributors. Many additional stations also receive programming sent over the satellite through local connections with downlink stations. The principal capital assets of the PRSS were funded by Congress, and NPR manages the PRSS pursuant to an agreement with the Corporation for Public Broadcasting. See 47 U.S.C. § 397(k)(10).

that individual station licensees possess.[14] Particularly in recent years, stations have been stymied in their efforts to construct new stations because of freezes on the filing of new applications as the Commission developed its policies for resolving mutually exclusive station applications among NCE applicants and NCE and commercial applicants.[15] In addition, channels are largely unavailable in more populated areas and purchasing existing stations is often cost prohibitive for non-profit and governmental entities. The multicast capability of the iBiquity technology instantly enables stations to tap the wealth of programming already available via the PRSS but heretofore unavailable to most of the public.

The opportunity to offer multiple audio program services will also spur stations and program producers to develop programming beyond what is available today. We expect stations to use the multicast capability to provide homeland security related services, addressing local, regional, or national events and emergencies, and provide expanded weather alerts, traffic safety, and other public safety services. With predictions that the prevalence of visual disabilities will increase markedly during the next 20 years as the US population ages,[16] we also expect NCE stations to continue leading the way in offering assisted living services, including radio reading services for the print-impaired.

A number of public radio stations also provide foreign language services via their

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[14] Over 80,000 hours annually of public radio programming are delivered over the PRSS. http://www.prss.org/producers.

[15] See In the Matter of Reexamination of the Comparative Standards for New Noncommercial Educational Applicants, Report and Order, 15 FCC Rcd. 7386, 7437 (2000) [hereinafter "NCE Comparative Standards Report & Order"], aff'd 16 FCC Rcd. 5074 (2001), aff'd sub nom. American Family Association v. FCC, 365 F.3d 1156 (2004).

[16] The Eye Diseases Prevalence Research Group, Causes and Prevalence of Visual Impairment Among Adults in the United States, 122 Journal of the American Medical Association 477-485, Apr. 2004.

subcarriers and are likely to avail themselves of the additional program capacity that IBOC offers to broadcast such services more widely.[17] News and public affairs programming is particularly associated with NCE stations, and multicasting will foster the expansion of local public affairs services generally[18] and services to serve the Latino, Asian, Native American, and other communities of common cultural interest in particular.[19]

Beyond the inherent public interest in additional program services, and in response to the Commission's inquiry,[20] NPR believes the availability of such services will drive consumer acceptance of digital radio and the deployment of new digital radio receivers. The Commission's effort to promote public acceptance of analog FM radio provides a useful historical reference for promoting public adoption of digital radio. In 1964, the Commission adopted program duplication limits, prohibiting FM stations from duplicating more than 50 percent of their

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17 See, e.g., Comments of Florence Hernandez Ramos, Denver Educational Broadcasting, Inc., licensee of KUVO, Denver, CO, MM Docket No. 99-325, at 1 (filed June 14, 2004) ("Providing more Hispanic music and education to our community is one of our main objectives and this [supplemental audio] channel would help us accomplish that goal."); Comments of David Spizale, University of Louisiana, licensee of KRVS-FM, Lafayette, LA, MM Docket No. 99-325, at 1 (filed June 11, 2004) (noting location of Acadiana region of French speaking people within station service area and the station's interest in multicasting to provide a "majority French/indigenous channel").

18 See, e.g., Comments of Greg Petrowich, University of Alaska, Fairbanks, licensee of KUAC(FM/TV), Fairbanks, AK, MM Docket No. 99-325, at 1 (filed June 10, 2004) (considering using multicasting to supplement existing services including the live broadcast of the Fairbanks North Star Borough Assembly and School Board meetings).

19 See, e.g., Comments of Don Rinker, Executive Director, Alaska Public Broadcasting Commission, MM Docket No. 99-325, at 1 (filed June 10, 2004) ("We have a number of Alaska Native populations with specific Native language needs that could be met using the supplemental audio channel. In fact, in many of our communities we have significant percentages of Latinos, Asian/Pacific Island languages and they too need special services that simply cannot be met using a single channel.").

20 See FNPRM/NOI at ¶ 20.

programming from a co-owned AM station in the same local area.[21] One of the central objectives was to encourage consumers to buy and use FM receivers by assuring the availability of unique programming services on the FM dial. Twenty years later, the rule had served its purpose, and the Commission repealed it.[22] More recently, the European transition to DAB has demonstrated a similar phenomenon: the availability of unique audio programming has compelled consumers to purchase radio receivers.[23]

In short, based on the Tomorrow Radio[sm] test results and the public interest benefits associated with multicasting, we submit that broadcasting multiple digital audio program services is in the public interest, and, to further the rapid adoption of digital radio, the Commission should authorize digital multicasting without delay and without requiring special licensing.

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21 Report and Order in Docket No. 15084, 45 FCC 1515 (1964).

22 In the Matter of Amendment of Section 73.242 of the Commission's Rules and Regulations in Regard to AM-FM Program Duplication, Notice of Proposed Rulemaking, MM Docket No. 85-357, 1985 FCC LEXIS 2245, at ¶ 8 (1985). Accord In the Matter of Amendment of Section 73.242 of the Commission's Rules and Regulations in Regard to AM-FM Program Duplication, Report and Order, MM Docket No. 85-357, 103 F.C.C.2d 922, at ¶¶ 9-10 (1986).

23 See Skip Pizzi, The BritDAB Invasion, RadioWorld, Mar. 28, 2004, http://www.radioworld.com/reference-room/skippizzi-bigpict/06_rwf_pizzi_march_28a.shtml (noting the successful adoption of DAB in the United Kingdom, the availability of a substantial number of radio services exclusively on DAB, and that "[a]s the DAB-only services have emerged in Britain, a closely correlated rise in receiver sales has taken place").

II. In Adopting Service Rules To Govern DAB, The Commission Should Establish a Basic Threshold Service Obligation But Otherwise Afford Station Licensees The Maximum Flexibility To Serve The Public Interest

As a threshold matter, we believe it is appropriate to require all radio stations to provide a free, over-the-air digital channel of equal or greater audio quality to its simulcast free over-the-air analog channel. Such a baseline requirement mirrors the Commission's requirement for digital television and guarantees that significant benefits of DAB will flow to the public.[24] Beyond this requirement, however, we submit there is no need for a new comprehensive regime of regulation to govern DAB, at least during the likely extensive period of hybrid analog/digital operations and especially in the case of public radio.

NCE radio stations have established a rich history, dating back to the early Twentieth Century,[25] of serving the public interest through the broadcast of noncommercial news, information, and cultural programming. This history is attributable in significant part to the organizational characteristics of NCE radio licensees and longstanding statutory and regulatory requirements under which they operate. Those institutional forces will continue to govern how NCE radio stations operate as stations convert to DAB and utilize the expanded functionality of the iBiquity technology.

In establishing a Federal system of support for public broadcasting, Congress emphasized the role of public broadcast stations as community resources and as outlets of community expression. As envisioned in the Public Broadcasting Act of 1967: "Local stations are the

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[24] In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, Fifth Report and Order, 12 FCC Rcd 12809, 12820-21 (1997) [hereinafter "ATV Fifth Report & Order"].

[25] See generally John Witherspoon and Roselle Kovitz, THE HISTORY OF PUBLIC BROADCASTING 6 (2000).

bedrock of this system [of public radio broadcasting] and as such must be responsive to the needs and desires of the public which they serve."[26] Throughout the ensuing 35 years, public radio stations have responded to this charge,[27] evolving to reflect the broad and increasing diversity of the United States itself.

Public radio station licensees represent a broad range of public and private, community-based organizations.[28] Common to this diverse array of licensees are two basic types of licensee -- governmental entities and nonprofit educational organizations -- both of which are uniquely compelled to serve the public interest.[29] Governmental entities are directly accountable to the residents whom they govern.[30] Nonprofit educational organizations are governed by (1) state laws regulating charitable organizations and, in the case of tax exempt organizations, (2) the Internal Revenue Code. The latter, in particular, requires an organization to devote all but an insubstantial part of its activities to educational purposes.[31]

The Communications Act and Commission rules also ensure that public broadcast

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26 S. Rep. No. 222, 90th Cong., 1st Sess. 7 (1967).

27 S. Rep. No. 221, 102d Cong., 2d Sess. 2, 7, *reprinted in* 1992 U.S. Code Cong. & Admin News 834, 835, 840 (1992) ("Public . . . radio stations and public telecommunications services constitute valuable local community resources for utilizing electronic media to address national concerns and solve local problems through community outreach programs and services.").

28 See Corporation for Public Broadcasting, Frequently Asked Questions About Public Broadcasting, http://www.cpb.org/pubcast/#who_runs.

29 See 47 U.S.C. § 397(6); 47 C.F.R. § 73.503(a). See also In the Matter of Reexamination of the Comparative Standard for Noncommercial Educational Applicants; Association of America's Public Television Stations' Motion for Stay of Low Power Television Auction (No. 81), Second Report and Order, 18 FCC Rcd. 6691, 6695-96 (2003).

30 Indeed, the Commission defines such entities as "local" throughout the area within which their authority extends. NCE Comparative Standards Report & Order, 15 FCC Rcd at 7409.

31 Treas. Reg. § 1.501(c)(3)-1(c)(1).

stations are and remain responsive to their communities of service. As a threshold matter, localism is the single greatest factor in the Commission's point system for resolving mutually exclusive NCE applications.[32] Community advisory boards, open public meetings, the presence of public board members, and other similar mechanisms enable "social forces" to serve as critical substitutes for the regulations that formerly specified the manner in which noncommercial educational stations were accountable to their communities of license.

> Many public broadcasters are required to have advisory boards and to hold public meetings when deciding important operating matters. Further, many other licensees . . . have public members on their governing boards. While it is true that stations licensed to state or local jurisdictions are not required to have advisory boards, these stations are often under even more direct public control since state and local officials are accountable for their action or inaction through the electoral process. Other stations licensed to organizations with a primary educational purpose are subject to the direction of these institutions and their governing boards. The station that ignores these representatives does so at its own peril.[33]

Finally, a significant portion of a public broadcaster's budget is composed of direct financial contributions from local audiences.[34] Public broadcasters therefore have a native bond in serving local needs and interests.[35]

These structural attributes contribute directly to the services public radio stations provide. In many markets, NCE stations provide the sole extensive local news coverage and are often the

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[32] See NCE Comparative Standards Report & Order, 15 FCC Rcd at 7404-7410.

[33] See Revision of Programming Policies and Reporting Requirements Related to Public Broadcasting Licensees, 98 F.C.C.2d 746, 754 (1984) [hereinafter "NCE Programming and Reporting Report & Order"]. See also H.R. Conf. Rep. No. 1774, at 30-31 (recognizing the importance of public meeting requirements to permit and encourage community involvement in the programmatic and operational decisions of noncommercial educational licensees).

[34] Station members are the single largest source of revenue, providing roughly one-quarter of public broadcasting's total revenue. See http://www.cpb.org/about/funding/whopays.html.

[35] See NCE Programming and Reporting Report & Order, 98 F.C.C. 2d at 753-754.

only outlet for classical music and related fine arts and cultural programming. NCE stations also provide listeners with access to talented new contemporary music performers, particularly regional and local performers. As grass roots local public services and arts organizations in their own right, NCE stations are dynamic contributors to the fabric of their community's local arts and cultural activities.

In light of the foregoing, we believe there is no need to impose comprehensive new regulatory requirements on stations that convert to DAB. Rather, stations are in the best position to determine the appropriate mix of services to best serve the needs and interests of their communities. The Commission should not mandate a minimum amount of high definition audio, for instance, or specify the amount of capacity stations should allocate to any given audio or data service.[36] As in the digital television proceeding, radio station licensees should have "the freedom to innovate . . . in developing the mix of services they will offer the public."[37] With respect to the allocation of a station's spectrum among its various services, it is worth noting that reducing the number of kilobits allocated to a given audio signal only affects the quality of the host station -- it poses no interference risk to other stations -- and the FCC long ago disclaimed its discretionary authority to regulate audio quality because stations have an obvious self-interest in broadcasting a good quality signal.[38]

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[36] See FNPRM/NOI at ¶ 19.

[37] ATV Fifth Report & Order, 12 FCC Rcd. at 12826.

[38] See In the Matter of: A Re-Examination of Technical Regulations, Report and Order, 99 F.C.C.2d 903, at 911 (1984) ("While the Commission has the discretionary authority, in many cases, to regulate the technical quality of telecommunications services and equipment, we find that it is not generally in the public interest to do so. Exceptions to this are limited to cases where there are explicit statutory or treaty mandates or some other overriding factor such as safety of life and property.")

Likewise, the Commission should adopt a general policy of permitting radio stations to produce and distribute any and all types of datacasting services. We agree that each free over-the-air audio program service should participate in the emergency alert system ("EAS").[39] Using relatively inexpensive distribution amplifiers and switching devices, stations should be able to carry EAS or other emergency information virtually instantaneously via each free over-the-air program channel. While we expect stations to develop and offer new types of emergency services, however, we do not believe stations should be compelled to offer additional, unspecified "emergency" or other services as a condition to offering any data services.[40]

Given the valuable lifeline services provided by radio reading services and public radio stations, NPR is committed to preserving existing SCA-based analog services during the digital transition. In addition, NPR will work to address instances of harmful interference that may result from the deployment of the iBiquity IBOC system. NPR is also committed to developing the iBiquity technology so that radio reading services may be offered via stations' digital spectrum for reception by generally available radio receivers.[41] Toward that end, NPR has taken the initiative in exploring the use of the extended hybrid spectrum for the digital transmission of radio reading services. In collaboration with the International Association of Audio Information Services, NPR will conduct audio and transmission platform tests this summer to determine the suitability of the extended hybrid digital spectrum for radio reading service transmission, pursuant to a Corporation for Public Broadcasting funded grant. This testing will measure the

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[39] See FNPRM/NOI at ¶ 37.

[40] See id.

[41] Radio reading services are currently only accessible via specialized receivers that are vulnerable to interference.

coverage capabilities of extended hybrid operation and provide full perceptual testing of the latest digital audio codecs that may be used for radio reading services. Finally, NPR believes that digital service rules applicable to radio reading service operations should be consistent with the analogous requirements of Section 73.593 governing analog radio reading services.

With respect to public interest obligations generally,[42] NPR believes it is appropriate to extend those obligations to the entirety of a station's free, over-the-air audio program services.[43] In the case of political broadcasting, for instance, the existing requirements apply to the "use" of a station, which could continue to be the case for a station that offers multiple over-the-air audio programming services.[44] We see no obvious need to apply the particular requirements separately to each individual broadcast program service.[45]

While it is appropriate to promote localism by preferring applicants with institutional interests in the proposed community of service, the Commission should not impose program origination, format, or content requirements.[46] Local radio stations are the heart of the public radio system , and those stations -- not NPR, another station, or any other program producer or distributor -- determine the mix of locally originated and independently produced programming

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42 See FNPRM/NOI at ¶¶ 31-32.

43 See id. We note the absence of public interest requirements in the case of satellite-based subscription audio services. See id. at 13 n.55.

44 See id. at ¶ 36. While the reasonable access requirement does not apply to NCE stations, the equal opportunity requirement does. 47 U.S.C. §§ 312(a)(7), 315.

45 Likewise, public file requirements, such as the quarterly issues and program list and the program sponsor list, could apply generally to the station's audio broadcast programming offering(s) rather than independently to each program service. See 47 C.F.R. § 73.3527.

46 See FNPRM/NOI at ¶ 34.

that is most responsive to the needs of their particular community. As noted above, public radio stations are also subject to open meeting and community advisory board requirements and other "social forces" that combine to assure the ascertainment of local needs and the broadcasting of locally responsive programming.[47]

Furthermore, the Commission cannot assume that the locus of the production of a particular program -- local, regional, or national -- is determinative of whether the programming meets the needs and interests of a given community of service. Indeed, a nationally-produced program that addresses a particular social, cultural, or health topic may be particularly responsive to the needs of a given community. To predicate a local origination requirement on more than simply the locus of production, moreover, would inevitably require editorial judgments about the content of programming, and the Commission properly eschewed such a role long ago.[48] Accordingly, requiring a specified amount of "local" programming in any broadcast audio program service, requiring stations to dedicate an entire programming service to "local" programming, or requiring a certain quantum of "news" or "public affairs" programming requires inherently subjective considerations and should be rejected as unworkable and outmoded.[49]

With respect to the Commission's existing radio regulations generally and the question of how those rules should apply to DAB stations, the Commission should refrain from modifying a given rule absent a changed circumstances that justifies the modification. In most cases, the existing rules should be adequate, even in the case of stations that offer multiple over-the-air

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47 See pages 10-11, supra.

48 See WNCN Listeners Guild v. FCC, 450 U.S. 582 (1981).

49 See FNPRM/NOI at ¶ 34.

broadcast services. There is no reason, for instance, to impose new requirements with respect to the leasing of airtime. Radio station licensees should be able to lease unused or excess airtime to unaffiliated audio programmers so long as the lease does not constitute a transfer of control for which prior Commission approval is required.[50] Likewise, the existing sponsorship identification requirements should apply when particular programming is sponsored, including programming that is part of a supplemental broadcast service.[51]

One difference that DAB, and multicasting in particular, presents and should be resolved concerns how a station should identify itself. The existing station identification rule prescribes specifically how this may be done.[52] We do not believe there should be separate call signs for separate streams. There are a limited number of call sign combinations to begin with, and licensees should not be forced to expend what may be considerable resources creating additional call sign identities. The Commission should provide licensees with some flexibility in identifying different over-the-air program streams beyond the station's call sign, station location and frequency or channel number information.[53]

Finally, it is premature for the Commission to even consider the service rules that should govern all-digital operations. The elegance of the DAB transition is that the public, through it's

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[50] 47 U.S.C. § 310(d). Since multicasting separate program streams over a station's existing channel cannot be accomplished via separate transmission facilities, a licensee should not be permitted to transfer control over portions of its licensed spectrum.

[51] FNPRM/NOI at ¶ 21.

[52] Id. at ¶ 39.

[53] For instance, a licensee should be able to identify an over-the-air audio service by reference to the type of service ("a classical music service of" station licensee), by a variant of the station's call sign or frequency ("WXYZ-1" or "88.5, channel 1"), or by other means that reasonably identify the station and the service.

response to digital services, will determine the pace of the transition. Even though we believe stations will develop compelling new digital radio services to drive consumer demand, there is an installed base of as many as 800 million analog radio receivers in use today.[54] Thus, it will likely be many, many years before stations could cease transmitting analog signals without disenfranchising a large segment of the public. Until the transition to all-digital operation becomes reasonably more imminent, we believe the Commission should refrain from adopting rules to govern all-digital operation.

III. NCE Stations Should Be Authorized to Offer Ancillary And Supplemental Services for Remuneration And Without Having to Pay Spectrum Fees

We view the transition to DAB as an unparalleled opportunity to expand the public service that public radio provides to the American people. The prospect of having an additional channel for broadcasting free over-the-air audio programming addresses a long pent-up demand by NCE stations for more spectrum to offer new and different NCE services. At the same time, and just as NCE radio broadcasters have been empowered to make some remunerative use of their analog spectrum and NCE television broadcasters have been authorized to make remunerative use of their digital spectrum, it is essential that the Commission trust and authorize stations to make appropriate use of their digital IBOC capability to generate revenue to facilitate the digital transition and underwrite the cost of providing NCE services to the public.

As we discussed above,[55] the Commission should allow stations, including NCE stations, to determine the appropriate mix of multicast and datacast services in the interest of serving their communities, subject to the threshold condition that they continue to provide a free over-the-air

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54 FNPRM/NOI at 6 n.27.

55 See Section II, supra.

analog audio program service and a free over-the-air digital audio simulcast of their free, over-the-air analog channel. NCE radio stations would obviously provide the free over-the-air analog and digital services on a noncommercial basis. Beyond this threshold requirement, however, NCE radio stations should be able to offer additional audio services as well as datacast services, including on a subscription basis.

The diversity of public radio revenue sources is the basis of its independence from any particular funding source and, ultimately, its editorial independence. Public radio funding derives from several sources: listeners who choose to become station members, businesses and foundations which choose to underwrite station programming and station operations, the Federal and state governments which provide support generally through appropriations of tax funds, and, to a far lesser extent, the remunerative use of station facilities, including the analog spectrum.[56] Unfortunately, these revenue sources are not consistent from year-to-year; underwriting and governmental support, in particular, can fall off dramatically.[57] While the remunerative use of station spectrum and facilities has previously provided only a modest contribution to public radio's revenue, the remunerative use of digital technology facilitates additional financial diversification that can only strengthen stations' ability to serve the public.

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[56] See http://www.cpb.org/about/funding/whopays.html. See also Radio Broadcast Services; Amendment of the Commission's Rules, Report and Order, BC Docket No. 82-1, 48 Fed. Reg. 26608, at ¶ 29 (1983) ("Over the years public broadcasting has obtained its support from three major sources: governmental funding, underwriting and individual contributions.") [hereinafter "NCE SCA Report & Order"]. In addition to remunerative use of analog SCAs, some stations also generate revenue through studio rentals. See http://www.kuow.org/about_studio_rentals.asp

[57] In the mid- to late-1990s, for instance, Federal government support through CPB declined precipitously for several years. At the same time, NPR and stations first benefited from the Internet "dot com" boom and then suffered following the Internet "dot bomb" bust.

The Commission possesses ample authority to authorize NCE stations to make remunerative use of their digital transmission capability. As the FNPRM/NOI explains,

> Section 399B of the Act permits public stations to provide facilities and services in exchange for remuneration as long as those uses do not interfere with the stations' provision of public telecommunications services. Section 399B, however, does not permit public broadcast stations to make their facilities "available to any person for the broadcasting of any advertisement."[58]

Consistent with this authority, the Commission has previously authorized NCE radio stations to make remunerative use of their analog SCA capability.[59]

Thus, shortly after the enactment of Section 399B governing public radio and public television, the Commission considered whether to authorize public radio stations to provide commercial services via their SCAs and concluded that commercial SCA use was consistent with the statute and the underlying congressional intent.

> Given the broad nature of the language in Section 399B permitting the offering of "services, facilities, or products" on a for-profit basis, the plain intent of Congress to encourage public broadcasters' ability to generate self-supporting income and the clear capacity of commercial subcarrier use to help meet the demonstrated need of public radio stations for such income, we are convinced that, generically, remunerative use of subcarriers is not only consistent with the requirements and authorizations of the 1981 Amendments, but advisable as a matter of policy as well. Accordingly, we shall authorize public radio stations to engage in the same range of remunerative activities on their subcarriers as do commercial stations.[60]

In a companion proceeding considering SCAs more generally, the Commission authorized FM radio stations to offer a range of non-broadcast SCA uses.[61]

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58 FNPRM/NOI at ¶ 61.

59 See 47 C.F.R. § 593.

60 NCE SCA Report & Order, 48 Fed. Reg. at ¶ 34.

61 FM Licensees; Amendment of the Commission's Rules Concerning Use of Subsidiary Communications Authorizations, First Report and Order, BC Docket No. 82-536, 1983 FCC LEXIS 648, at *16 (1983) (these uses included "paging, distribution of inventory, price and

While public radio and public television share a common statutory proscription against the broadcasting of advertising, their authority to offer remunerative services differs in two important respects.

First, and as the FNPRM/NOI notes, public television is subject to a regulatory mandate to furnish "primarily" a non-profit and noncommercial television broadcast service. The Commission has interpreted this requirement to mean that digital television stations must devote "a 'substantial majority' of their entire digital capacity" to non-profit and noncommercial television broadcast services.[62] NCE radio stations, on the other hand, are not subject to a similar quantitative restriction. Instead, they are licensed "for the advancement of an educational program."[63]

The distinction is both significant and important to maintain. As a general matter, the IBOC approach to DAB means that radio stations have relatively little digital spectrum -- unlike DTV, DAB does not involve a new allotment of spectrum for digital use. As a result, a minimum quantitative requirement will impose a far greater limitation on station flexibility in determining the appropriate mix of services. In addition, a minimum quantitative requirement would stand in the way of technological innovation, which will otherwise reduce the number of bits required to produce a quality audio service. We therefore urge the Commission to specify the appropriate service outcome -- a digital NCE service of equal or greater quality to the free over-the-air NCE analog broadcast service -- without specifying an amount of the digital

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delivery information by businesses, bus dispatching for local and regional transportation and police communications to all substations").

62 In the Matter of Ancillary or Supplementary Use of Digital Television Capacity by Noncommercial Licensees, Report and Order, 16 FCC Rcd. 19042, 19048 (2001).

63 FNPRM/NOI at ¶ 61 n.120.

bitstream required to provide the NCE service.

DAB and DTV are distinct from a regulatory perspective in a second important way: as a matter of law and public policy, digital NCE radio stations should not be subject to spectrum fees. The Commission's authority to impose fees derives from specific statutory authorizations rather than any general grant of authority. Sections 8 and 9 of the Communications Act of 1934, as amended, provide for the collection of application fees and the annual assessment and collection of regulatory fees, respectively.[64] In each case, Congress exempted NCE stations from the fees[65] -- notwithstanding NCE radio stations' ability to utilize their SCAs for remunerative purposes -- continuing a longstanding policy of exempting NCE stations from such fees.[66] While Section 336 of the Act specifically authorizes the imposition of spectrum fees for certain ancillary or supplementary services, that Section is explicitly directed to DTV licensees

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64 47 U.S.C. §§ 158, 159.

65 See 47 U.S.C. §§ 158(g) (omitting NCE radio stations from the Schedule of Application Fees), 159(h) (exempting governmental or nonprofit entities). See also H.R. 3128, H.R. Rep. No. 453, 99th Cong., 1st Sess. 39-42, 423 (1985) ("non-commercial radio and television stations will not be subject to any of the [application] fees listed in this schedule."); H.R. Rep. No. 207 102d Cong., 1st Sess. 16 (1991) ("public television and radio licensees were exempted from user fees . . . in the public interest); In the Matter of Establishment of a Fee Collection Program to Implement the Provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, Report and Order, Gen Doc. No. 86-285, 2 FCC Rcd 947, at ¶ 73 (1987) (application fee exemption); In the Matter of Implementation of Section 9 of the Communications Act Assessment and Collection of Regulatory Fees for the 1994 Fiscal Year, Report and Order, 9 FCC Rcd 5333, 5339-40 & 5341 (1994) (regulatory fee exemption).

66 See In the Matter of Amendment of Subpart G of Part 1 of the Commission's Rules Relating to the Schedule of Fees, Report and Order, 23 F.C.C.2d 880, Appendix (1970) (adopting Section 1.1111(b), exempting "[a]pplications filed by tax exempt organizations for the operation of stations providing noncommercial educational broadcast services, whether or not such stations operate on frequencies allocated for noncommercial educational use.")

and services.[67]

The denial of Commission authority to impose fees on public radio stations is no accident. As the Commission has explained, the exemptions from the existing statutory fee provisions were intended to reinforce the financial support that Congress provides through CPB and the Department of Commerce.

> We believe that the congressional exemption for noncommercial educational applicants was intended to enhance the financial support for these services beyond that provided by the Corporation for Public Broadcasting and National Telecommunications and Information Administration (NTIA) facilities grants. Indeed, exacting fees from noncommercial educational applicants would dilute the financial support offered by Congress.[68]

As noted above,[69] Congress charged public radio with generating additional revenue through non-Federal sources, and the application of a spectrum fee would diminish the net revenue that stations would otherwise realize from ancillary and supplementary activities.

By the same token, exempting NCE radio stations from any spectrum fee the Commission may seek to impose would not entice NCE radio stations to pursue commercial activities at the expense of their public service mission. In the first place, the IBOC approach to DAB does not provide NCE radio stations with extensive additional digital spectrum, at least during what is likely to be a lengthy period of hybrid operations and especially compared to DTV. In addition, since NCE radio stations can only be licensed to governmental entities or

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67 See 47 U.S.C. § 336(e).

68 In the Matter Establishment of a Fee Collection Program to Implement the Provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, Memorandum Opinion and Order, 3 FCC Rcd 5987, 5988 (1988). See also In the Matter of Implementation of Section 9 of the Communications Act; Assessment and Collection of Regulatory Fees for the 1994 Fiscal Year, Notice of Proposed Rulemaking, 9 FCC Rcd 6957, 6967 (1994).

69 See note [60], supra, and accompanying text.

non-profit organizations,[70] they are generally restrained from engaging in commercial activities. Governmental entities are often prohibited from providing commercial services,[71] and tax exempt non-profit organizations are permitted to engage in commercial activities only to an insubstantial extent under the Internal Revenue Code,[72] and they must pay taxes on any such "unrelated" income.[73]

As in the case of SCAs, we do not expect the remunerative use of digital spectrum to result in a profusion of commercial service offerings by NCE radio stations.[74] Because NCE licensees are compelled to offer noncommercial news, informational, and cultural programming for the reasons described above,[75] we expect any subscription or other services to relate to the fundamental NCE mission. For instance, although subscription services are not anticipated for several generations of digital radio receivers, we believe some NCE radio stations will experiment with offering "pledge-free," but otherwise identical, versions of their free over-the-air services to those listeners who financially support the station. To do so, however, NCE radio stations must be authorized to provide subscription services, and they should not have to pay spectrum fees for what is simply a subscription version of an NCE service.

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70 See note [29], supra.

71 See Nixon v. Missouri Municipal League, 124 S. Ct. 1555; 158 L. Ed. 2d 291 (2004).

72 "An organization will be regarded as operated exclusively for one or more exempt purposes only if it engages primarily in activities which accomplish one or more of such exempt purposes specified in section 501(c)(3). An organization will not be so regarded if more than an insubstantial part of its activities is not in furtherance of an exempt purpose." Treas. Reg. § 1.501(c)(3)-1(c)(1).

73 26 U.S.C. § 511.

74 Many public radio stations use their SCAs to transmit radio reading services.

75 See pages 10-11, supra.

IV. The Commission Should Consider Limited Changes to Its Technical Rules

In considering which technical rules the Commission should modify or adopt, we believe the Commission should adhere to the same general approach, discussed above,[76] of refraining from adopting or modifying a rule unless compelled to by new or changed circumstances. While we believe the iBiquity DAB system will not necessitate an entire set of new technical rules, there are several issues, addressed below, that warrant the Commission's attention. In addition, while perhaps not requiring immediate attention, the Commission should be vigilant of potential radio receiver issues as stations implement the iBiquity DAB system. Maximizing the service capabilities of the iBiquity system, including multicasting, will depend on receiver manufacturers incorporating the necessary functionality into receivers, and the public interest should not depend entirely on the good will and business interests of receiver manufacturers.

A. The Commission Should Re-examine the Continuing Need for the Existing Channel 6 Rules

In inquiring generally about the need for technical rule changes, the Commission asks specifically about interference between television Channel 6 and the immediately adjacent FM spectrum reserved for NCE use.[77] The Commission asks whether any rule changes are necessary to protect analog television Channel 6 stations from digital radio stations and whether new changes are needed to protect DTV Channel 6 stations.[78] Since interference by reserved FM spectrum NCE stations to television Channel 6 stations has always been attributable to the performance characteristics of television receivers, and given significant changes since the

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76 See pages 15-16, supra.

77 FNPRM/NOI at ¶ 51.

78 Id.

television Channel 6 rules were adopted, the Commission should first ascertain whether existing analog and digital television receivers are still incapable of rejecting adjacent analog or digital FM signals.

Since 1985, Section 73.525 of the Commission's Rules has required reserved FM band NCE stations to protect the signals of adjacent television Channel 6 stations.[79] The Commission adopted Section 73.525, even though it recognized that "[t]he problem is widely recognized as a problem in the design of the television receiving system. Television sets have been designed in such a way that under certain conditions they are unable to reject the undesired FM signal."[80] Notwithstanding the actual cause of the problem, the Commission adopted a regulatory provision generally requiring NCE broadcast stations to limit their facilities and coverage areas to avoid interference to the reception of television Channel 6 stations. The direct consequence of Section 73.525 has been to limit the service that NCE stations throughout the reserved portion of the FM band can offer to the public in the more than fifty television Channel 6 markets that exist across the country,[81] covering nearly two thirds of the area of the United States.[82]

The decision to sacrifice NCE service to protect television Channel 6 reception was

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[79] 47 C.F.R. § 73.525. See Changes in the Rules Relating to Noncommercial Educational FM Broadcast Stations, Memorandum Opinion and Order, 58 R.R.2d 629, at 630-31 (1985) [hereinafter "Channel 6 Memorandum Opinion and Order"]. In particular, new reserved FM band NCE stations and stations that have sought to modify their facilities since 1985 have been required to demonstrate that the modified facility would not result in new interference to the television Channel 6 reception of no more than a specified number of persons. 47 C.F.R. § 73.525(b)-(c).

[80] Public Notice, FCC 81-340, rel. July 22, 1981.

[81] See 47 C.F.R. § 606.

[82] Comments of the University of Northern Iowa, MM Docket No. 95-31, at 2 (filed Apr. 3, 2002).

intended to be a temporary one.[83] Indeed, the Commission declined to address the actual cause of the interference problem -- the need for improved receiver performance -- because it believed private industry was in the process of developing voluntary standards.[84] In the almost twenty years since adopting Section 73.525, however, the Commission has never reexamined the issue to determine whether the adjacent channel interference that occurred at that time remains a problem.

It is hard to imagine a less efficient spectrum policy. To the extent today's television receivers remain incapable of rejecting adjacent reserved FM NCE signals, the Commission's policy actually removes any incentive for television receiver manufacturers to address the issue. Specifically, while the Commission assumed television receiver manufacturers would correct the design flaw in television sets, the Commission adopted a regulatory policy that required reserved FM stations to avoid causing interference to the reception of adjacent television channel 6 stations, thereby "remedying" the interference problem -- at least as far as the receiver manufacturers were concerned.

Significantly, we believe changes in the multimedia landscape and improvements in television set design in the two decades since the adoption of Section 73.525 may already have eliminated the need to require reserved FM radio stations to protect adjacent television Channel 6 stations. As the Commission has elsewhere noted, most television viewing occurs via cable

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[83] Channel 6 Memorandum Opinion and Order, 58 R.R. 2d at 629 ("[T]his proceeding has attempted to provide an interim solution.")

[84] See id., 58 R.R.2d at 632 ("[T]the [consumer electronics] industry appears to have every intention of developing improved immunity standards on its own.").

and satellite rather than over-the-air broadcasting.[85] Thus, in the overwhelming majority of homes in the United States, adjacent channel interference to over-the-air television broadcast reception would have no practical impact.

With the advent of digital television, moreover, television sets were promised to be more immune to the type of interference posed by an upper adjacency service.[86] Since the design flaw that rendered television sets in 1985 susceptible to interference was understood at the time to be a relatively minor one to remedy, one would expect modern digital television sets to offer vastly improved interference immunity characteristics. If current television receivers are, nonetheless, still susceptible to adjacent spectrum interference, the Commission should know that and the reason why that is still the case. In either event, the Commission should not simply extend existing rules of questionable public interest value.

Finally, putting aside the performance characteristics of television receivers and considering just the substitution of an IBOC transmission system for an analog one, the potential for increased interference is minimal. While IBOC DAB adds both bandwidth and energy to the host FM signal, neither should result in additional television Channel 6 interference. In its prior examination of television Channel 6 interference, the Commission determined that relative signal

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85 See Testimony of W. Kenneth Ferree, Chief, Media Bureau, Federal Communications Commission, before the Subcommittee on Telecommunications and the Internet, House Energy and Commerce Committee, Advancing the DTV Transition: An Examination of the FCC Media Bureau Proposal, June 2, 2004, http://energycommerce.house.gov/108/action.htm. According to the cable and satellite television trade associations, almost 70 percent of U.S. homes subscribe to cable, http://www.ncta.com/Docs/PageContent.cfm?pageID=86, and almost 20 percent of U.S. homes subscribe to satellite television. http://www.sbca.com/mediaguide/factsfigures.htm.

86 See In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, Sixth Report and Order, 12 FCC Rcd 14,588, 14657-58 (1997) (noting that, according to television industry representatives, "improved performance capabilities of DTV receivers will reduce the potential for interference between DTV Channel 6 and FM radio service.").

strength, not spectrum width, was the dominant interference factor.[87] Since IBOC is added nominally at -20 dBc[88] (1/100th the power) relative to the host FM carrier, the increase in hybrid power is negligible. Accordingly, the transition from analog to digital radio itself would not justify imposing new restrictions on reserved FM spectrum NCE stations.

B. The Commission Should Facilitate the Use of Digital Translator and Booster Stations, But Not Mandate The Conversion of Existing Analog Translators or Boosters

As the FNPRM/NOI properly recognizes, although implementation of IBOC should not affect the operation of analog translator and booster stations, additional testing is required to understand how digital translator and booster stations will function.[89] We also recognize the important public service that translators, in particular, provide to millions of Americans, especially in rural and other underserved areas. We therefore share the Commission's interest in ensuring that the benefits of the digital conversion extend to those areas served by translators, and we are hopeful that digital technology will avoid the host interference problems that have long plagued analog booster stations.

In response to the specific question posed in the FNPRM/NOI, we believe the Commission should facilitate the use of digital translators and booster stations. Given the evolutionary nature of the iBiquity technology, we are confident that further testing and analysis will determine how low power transmitters can be made to extend or fill-in the signal of a

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87 See Changes in the Rules Relating to Noncommercial, Educational FM Broadcast Stations, Second Further Notice of Proposed Rulemaking, 47 Fed. Reg. 24144, at ¶ 5 (1982) ("The amount of interference resulting from the operation of a noncommercial, educational FM station is fundamentally dependent upon the selectivity of the TV receiver and the signal strength ratio (at the TV receiver) between the TV and FM signals.")

88 dB (decibels) below carrier.

primary station without causing harmful interference. The Commission should not, however, mandate the conversion of existing analog translator or booster stations as a condition of converting the primary station that feeds the translator or booster. While the digital radio conversion is relatively less costly to individual stations than is the DTV transition, converting entire translator networks would be cost prohibitive in those rural and other underserved areas of the country where such networks are widespread. Thus, imposing an all-or-nothing requirement is likely to deter stations from converting, thereby resulting in less net digital service.

C. If the Commission Authorizes Stations to Use Alterative Delivery Means to Feed Non-Reserved FM Translators That Extend the Station's Signal Beyond Its Primary Coverage Area, The Commission Should Adopt Measures to Protect Broadcast Localism

We recognize, as the FNPRM/NOI points out, that the use of satellite technology among other technological means to deliver a quality signal to a translator operating on non-reserved FM spectrum and extending the signal of a primary station may be important to extending digital radio service. We are concerned, however, that the unlimited use of satellite technology or other alternative means of signal delivery could undermine one of the bedrock principles underlying the system of broadcasting in the United States -- localism.[90] It could do so by encouraging the proliferation of national satellite-fed translator networks, which, in turn, prevent others from obtaining scarce broadcast spectrum to fill-in gaps in service areas or to extend service to adjacent service areas.

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89 FNPRM/NOI at ¶ 54.

90 The Communications Act of 1934 established localism as a touchstone for the allocation of spectrum for over-the-air broadcast use. 47 U.S.C. § 307(b). See also Pinellas Broadcasting Co. v. FCC, 230 F.2d 204, 207 (D.C. Cir. 1956) ("In requiring a fair and equitable distribution of service, Section 307(b) encompasses not only the reception of an adequate signal but also community needs for programs of local interest and importance and for organs of local self-expression."), cert. denied, 350 U.S. 1007.

If it is necessary to authorize non-reserved FM spectrum translator stations to utilize alternative means to extend a primary station's signal, the Commission should consider possible distant limitations to preserve translator service as an adjunct to local broadcast service. Thus, the Commission might establish a simple mileage table based on station class[91] or the 30 dBu F(50-50) signal contour[92] to approximate the maximum distance at which a "parent" station's off-air signal could adequately feed a translator station. Alternatively, the Commission might authorize satellite-fed translators located in the same state as the "parent" station or, to accommodate "parent" stations located near a state border, a contiguous state. Such an approach is less effective in mirroring the service contours achievable with off-air signal delivery, but it may be somewhat easier to administer.

As a supplement to any distance limitation, we would also encourage the Commission to permit the use of satellites to feed a translator that will serve an area in which the applicant or licensee is "local" as determined under the Commission's rules for resolving mutually exclusive applications among NCE applicants.[93] Just as the Commission's rules are designed to promote localism in the awarding of NCE licenses, authorizing the use of satellites to feed translators serving the area in which the applicant or licensee is local will facilitate the use of the most appropriate technology while preserving the translator service as an adjunct to local

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91 This approach would not account for differences in antenna height and power level.

92 The 30 dBu is roughly the point at which a translator ceases being able to receive a noise/fade-free signal for rebroadcast.

93 Specifically, the Commission's rules for resolving mutually exclusive applications among NCE applicants define "local applicant" as "[a]n applicant physically headquartered, having a campus, or having 75% of board members residing within 25 miles of the reference coordinates for the community to be served, or a governmental entity within its area of jurisdiction." 47 C.F.R. § 73.7000.

broadcasting.

There may well be other alternatives to a distance limitation that facilitate the use of digital translators while preserving localism in the translator service. Recognizing that balancing the two will be difficult to achieve, however, the Commission should propose possible distance or other limitations for public comment as part of a subsequent notice of proposed rulemaking rather than adopting a specific proposal in response to the FNPRM/NOI. Such a measured approach would further the eventual conversion of digital translators without sacrificing localism or unintentionally precluding the conversion of truly local translator stations by operation of a particular distance or other limitation.

V. Unless and Until There Is An Imminent Problem Warranting Receiver-Based Digital Audio Content Controls, It is Premature for the Commission to Pursue Possible Remedial Measures

As producers of copyrighted works, NPR and its Member stations appreciate the harm that may result from the unauthorized copying and widespread distribution of copyrighted works. We also recognize, however, that the imposition of digital content controls may limit appropriate private noncommercial uses of copyrighted works, and great care must be taken to assure an appropriate balancing of interests. Accordingly, while we support the Commission's preliminary consideration of the need for digital audio content controls, we believe that, absent concrete evidence of reasonably imminent harm to copyright owners, it is premature for the Commission to pursue specific regulatory measures.

As a threshold matter, there is a substantial question whether the Commission is empowered to regulate in this matter. It is far from clear that unauthorized digital audio copying will become so pervasive that it discourages the licensing of copyrighted works to broadcasters,

thereby threatening free over-the-air radio broadcasting.[94] It is also unclear to what extent unauthorized copying will harm copyright owners. Indeed, the Audio Home Recording Act[95] would seem to mitigate any harm by assuring adequate compensation to copyright owners through the sales of blank recording media.[96]

As is generally the case, the burden should be on the proponent of a new regulation to demonstrate a concrete need for it.[97] At this point in time, the alleged threat is speculative because it depends on radio receivers that are not even on the design stage horizon. It is also not clear that the unauthorized copying and distribution that the RIAA fears will materially harm its members interests given other possible reasons for a decline in the sale of sound recordings and other means by which sound recordings can be copied and widely distributed. Accordingly, while it may be appropriate for the Commission to consider the matter, there is no present or reasonably imminent future need for the Commission to act.

Conclusion

NPR strongly supports the Commission's efforts to facilitate the transition to digital radio broadcasting and urges the prompt authorization of digital multicasting and adoption of other appropriate measures consistent with the foregoing comments.

Respectfully submitted,

NATIONAL PUBLIC RADIO, INC.

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94 47 U.S.C. § 154(i). See FNPRM/NOI at ¶ 69.

95 Pub L. No. 102-563, 106 Stat. 4237 (1992); 17 U.S.C. §§ 1002-1010.

96 See FNPRM/NOI at ¶ 69.

97 See 47 C.F.R. § 1.401(c).

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